

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/30581

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H02M3/335

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H02M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/172055 A1 (BALAKRISHNAN BALU ET AL) 21 November 2002 (2002-11-21) paragraph '0044! - paragraph '0103!; figures 1-7	1, 8, 15
A	US 5 892 355 A (PANSIER FRANS ET AL) 6 April 1999 (1999-04-06) the whole document	1-20
A	EP 1 215 808 A (SEMICONDUCTOR COMPONENTS IND L) 19 June 2002 (2002-06-19) the whole document	1-20

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- *&* document member of the same patent family

Date of the actual completion of the international search

27 April 2004

Date of mailing of the international search report

07/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax (+31-70) 340-3016

Authorized officer

Jonda, S

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 03/30581

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002172055	A1	21-11-2002	US 6462971 B1 08-10-2002
			US 2003107359 A1 12-06-2003
			US 2004071001 A1 15-04-2004
			US 2002158656 A1 31-10-2002
			US 6351398 B1 26-02-2002
			US 6366481 B1 02-04-2002
			US 6313976 B1 06-11-2001
			US 6356464 B1 12-03-2002
			US 6304462 B1 16-10-2001
US 5892355	A	06-04-1999	EP 0904545 A2 31-03-1999
			WO 9843100 A2 01-10-1998
			JP 2000511285 T 29-08-2000
EP 1215808	A	19-06-2002	EP 1215808 A1 19-06-2002
			US 2002070720 A1 13-06-2002